MONTHLY WEATHER REVIEW.

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The MONTHLY WEATHER REVIEW is based on data from about 3500 land stations and many ocean reports from vessels taking the international simultaneous observation at Greenwich noon.

Special acknowledgment is made of the data furnished by the kindness of cooperative observers, and by Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Camilo A. Gonzales, Director-General of Mexican Telegraphs; Capt I. S. Kimball, General Superintendent of the United States Life-Saving Service; Commandant Francisco S. Chaves, Director of the Meteorological Service of the Azores, Ponta Delgada, St. Michaels, Azores; W. N. Shaw, Esq., Secretary, Meteorological Office, London; H. H. Cousins, Chemist, in charge of the Jamaica Weather Office; Rev. L. Gangoiti, Director of the Meteorological Observatory of Belen College, Havana, Cuba.

As far as practicable the time of the seventy-fifth meridian, which is exactly five hours behind Greenwich time, is used in the text of the MONTHLY WEATHER REVIEW.

Barometric pressures, both at land stations and on ocean vessels, whether station pressures or sea-level pressures, are reduced, or assumed to be reduced, to standard gravity, as well as corrected for all instrumental peculiarities, so that they express pressure in the standard international system of measures, namely, by the height of an equivalent column of mercury at 32° Fahrenheit, under the standard force, i. e. apparent gravity at sea-level and latitude 45°.

SPECIAL ARTICLES, NOTES, AND EXTRACTS.

THE CYCLONIC STORM OF OCTOBER 6-12, 1905, IN THE NORTH ATLANTIC OCEAN.

By Mr. JAMES PAGE, Chief, Division of Ocean Meteorology. Dated February 15, 1906.

Throughout the interval covered by October 6–12, 1905, the western half of the North Atlantic Ocean was the scene of a cyclonic storm of great violence, which during the period mentioned made its way from the Caribbean Sea to the vicinity of Newfoundland. At the center of the barometric depression accompanying this storm the atmospheric pressure diminished to 27.90 inches (709 mm.). Throughout the latter part of its course the area over which winds of hurricane force prevailed attained a diameter of 600 miles, or more, and the attendant seas were so high as to seriously retard and in some cases damage even the staunchest of such of the transatlantic liners as came within the area of maximum severity, while vessels of ordinary power were obliged to heave to and remain practically unmanageable until the storm subsided.

As is usual at this season of the year, the storm was of tropical origin, the first intimation of its existence being contained in the weather report returned to the U. S. Weather Bureau by Capt. Egidio Gibelli, master of the Italian bark *Primo*, bound from Antwerp to Pensacola. The position of the bark at Greenwich mean noon (local mean time 7:35 a. m.) of October 6 was latitude 15° 2′ north, longitude 65° 58′ west, 200 miles to the southward of Porto Rico, and the master's report for the preceding 24 hours reads as follows:

> Light winds from ESE., increasing in force; between 11 a. m. and 12 noon (of October 5) the barometer fell rapidly from 29.96 to 29.90 inches, the sky at times covered by dense masses of clouds. As a precaution I hove to, with head to sea, for observation, content to sacrifice time in order to ensure safety. At 3 p. m. the barometer stood at 29.88 inches, and a dense nimbus cloud covered the northwestern sky. In about an hour the clouds commenced to break, the barometer ceased to fall, and the weather began to assume its normal aspect; proceeded on course.

The storm was felt throughout the island of Haiti on the following day. The weather report returned by Professor Scherer, Director of the Meteorological Observatory at Port au Prince, states that the sky was continuously overcast from October 1–6; at St. Nicolas Mole a furious gale from the SW. prevailed during the night of October 5–6, accompanied by exceptionally high tide and heavy seas. The gale continued without interruption throughout October 6. Three sailing vessels were driven ashore and the neighboring plantations were damaged by inundations. The total rainfall was 3.8 inches. Throughout the interior of the island the rivers overflowed their banks, inflicting great damage upon the coffee, cane, and banana crops; trees were uprooted, and houses destroyed. The inundations were especially severe in those streams rising near the Morne de Selle and on its northern slope. In Port au Prince the barometer fell to 29.72 inches.

Upon emerging from the Caribbean Sea into the Atlantic the area of low barometer and strong winds retained the small diameter which characterizes these storms as long as confined to tropical latitudes. During October 7 and 8 a number of vessels en route to and from West Indian waters must have been within easy distance of the center of the hurricane, but none report more than lowering, squally weather with barometer slightly below the average. Thus, the French cruiser *Troude*, Captain Mottez in command, left Bermuda October 5, bound for Martinique; followed a southerly course along the meridian of 64° west, passing Sombrero at midnight October 9–10. Her barometer gave no evidence of the existence of a depression in the vicinity. At 4 p. m. of October 7, position 26° north, 64° west, the wind suddenly freshened from the south, showing that the vessel had penetrated the outskirts of the cyclonic circulation, its force, however, at no time exceeding 5 on the Beaufort scale. To the westward of the line of progress, throughout October 7 and 8, the presence of the depression gave rise to a steepening of the barometic gradients extending as far as the American coast, with the result that throughout this whole region as far north as Hatteras northeasterly gales of force 8 prevailed, as shown by the reports of the *Alene* (Ger. S. S.), Wolpert; the *Caracas* (Am. S. S.), Goodrich; the *Nordfarer* (Dan. S. S.), Brunich, and numerous other vessels.

The weather conditions existing over the western half of the ocean at the instant of Greenwich mean noon of October 9 are shown by the accompanying synoptic weather chart, fig. 1. Upon this date the full violence of the storm was encountered by the *France Marie* (34[1]), bound from Gibraltar to the Capes of the Delaware by way of the trades. The characteristic features by means of which the trained observer is accustomed

[1] Number 34 in the accompanying list and on the synoptic charts. In these charts the arrows fly with the wind, the center of the arrowhead marking the position of the vessel. The number of feathers gives the force of the wind on the Beaufort scale; the shading of the head shows the proportion of clouded sky.